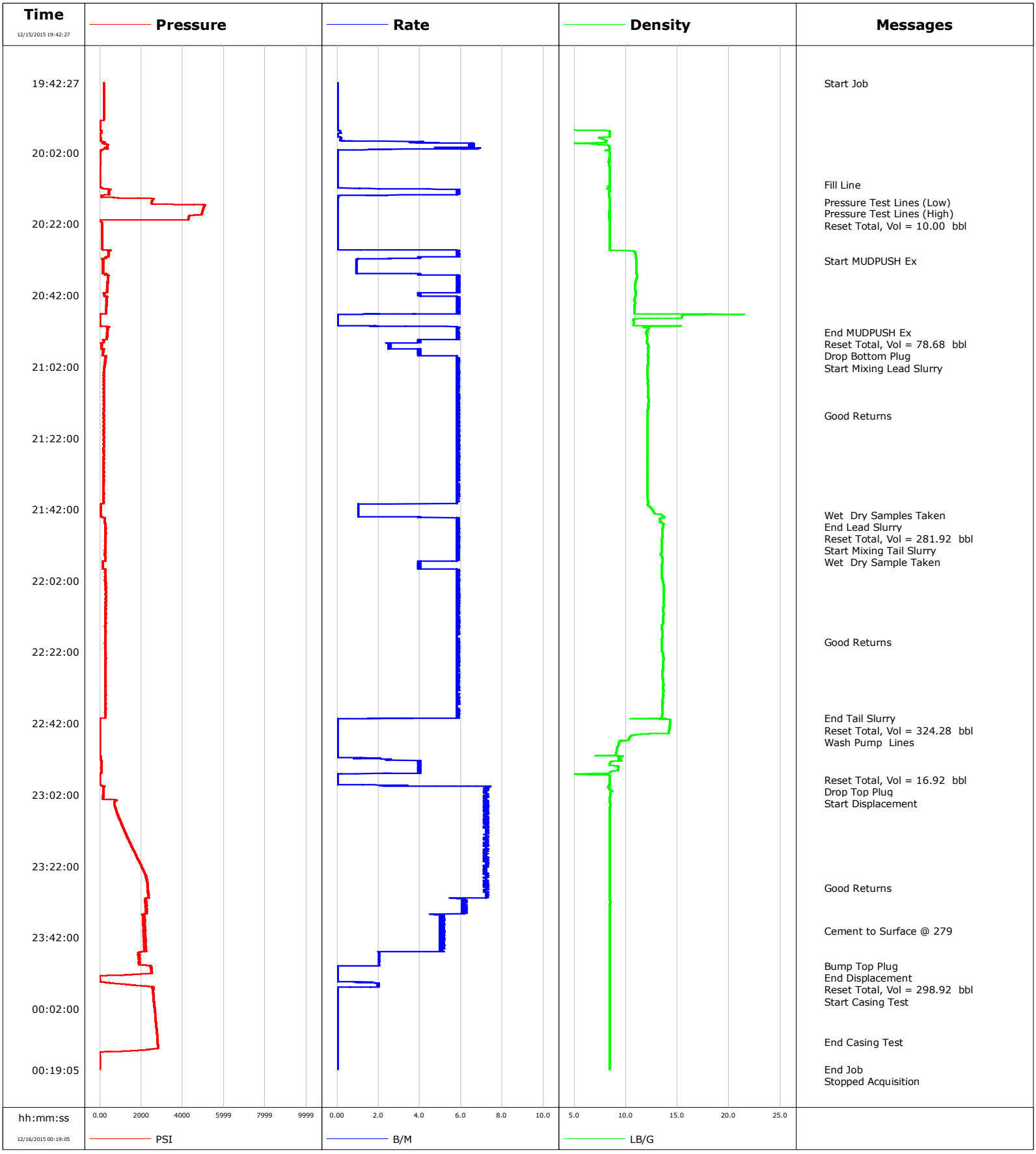
Schlumberger

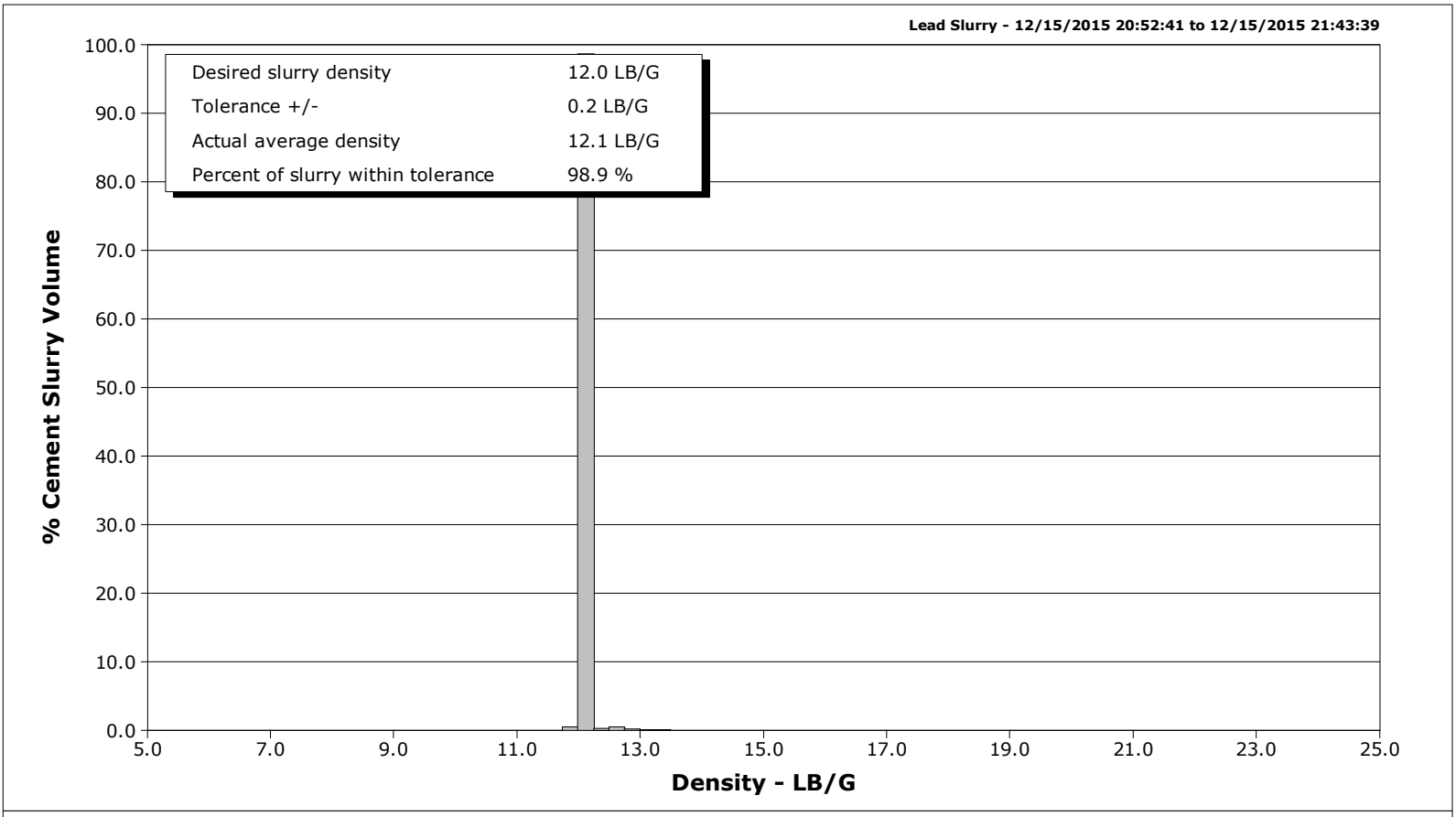
Cementing Job Report

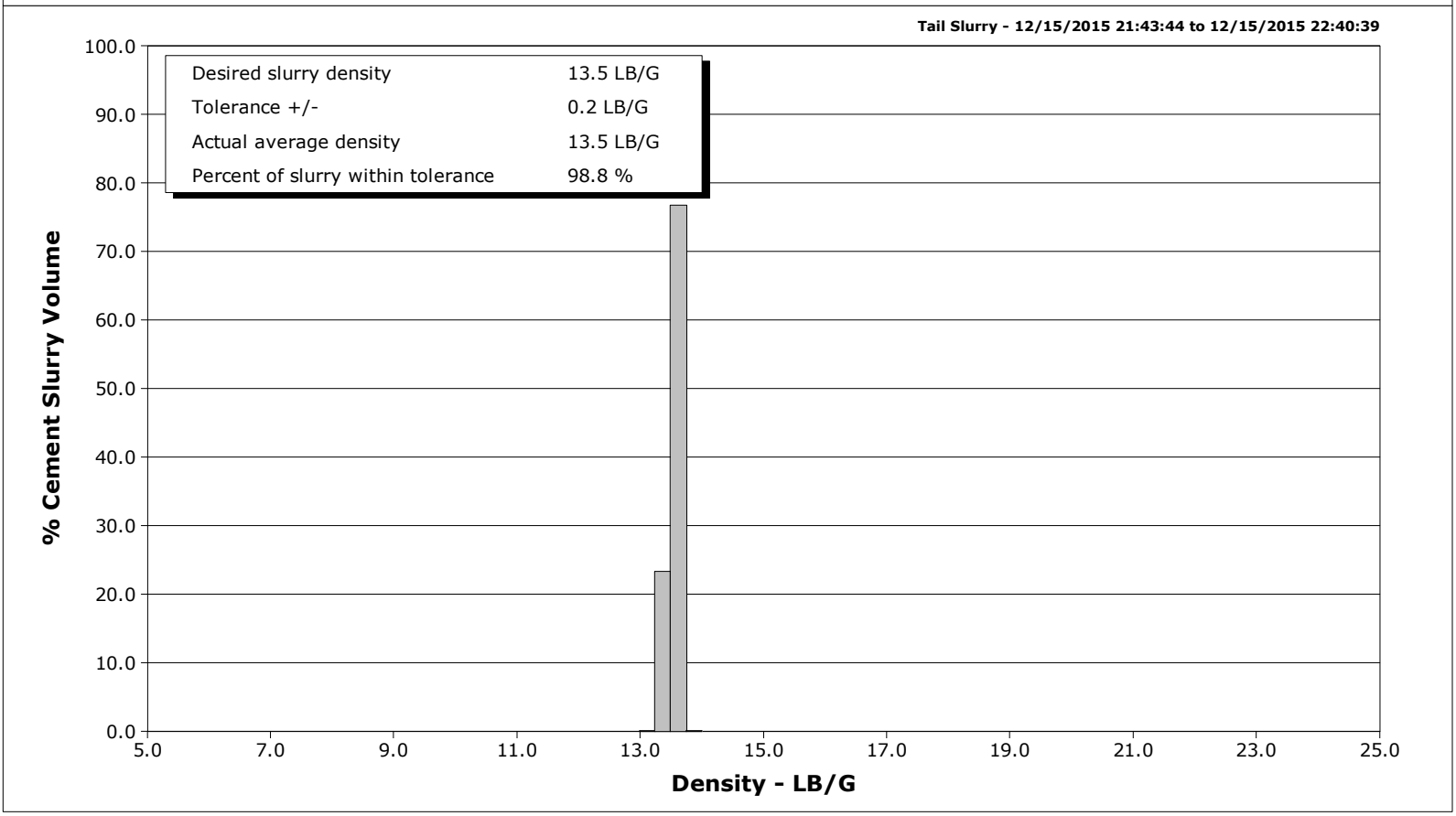
Well	Alvin	**Client**	Anadarko
Field	Wattenberg	**SIR No.**	CYUT-00151
Engineer	Wayne Silvester/Justin Storey	**Job Type**	Monobore
Country	United States	**Job Date**	12-15-2015



Schlumberger Cementing Qa/Qc Density Report

Well	Alvin	**Client**	Anadarko
Field	Wattenberg	**SIR No.**	CYUT-00151
Engineer	Wayne Silvester/Justin Storey	**Job Type**	Monobore
Country	United States	**Job Date**	12-15-2015





Schlumberger

Cementing Service Report

Customer	Job Number
Anadarko	CYUT-00151

Well	Location (legal)	Schlumberger Location	Job Start
Alvin 2C-29HZ	217304	Cheyenne	Dec/15/2015

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
Wattenberg	Shale	deg	8.5 in	12994.3 ft	7268.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Weld	Colorado	2500 psi	234 degF	231 degF	lb/gal

Well Master	API/UWI
0631659928	05123422050000

Rig Name	Drilled For	Service Via
X24	Oil & Gas	Land

Offshore Zone	Well Class	Well Type
	New	Other

Drilling Fluid Type	Max. Density	Plastic Viscosity
LT OBM	9.70 lb/gal	cP

Service Line	Job Type
Cementing	Monobore

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
psi	2500 psi	5 1/2

Service Instructions

Rig-Up, Prime-Up Pressure-Test (2.5% variance in 3 minutes) per Standard 5
2. Confirm design with Client Representative
3. Check Mud Density and Rheology.
4. Perform Water Quality test prior to job.
5. Pump MUDPUSH Express at least 0.2ppg heavier than Mud.
6. DO NOT PUMP ANY SLURRY BELOW MUD WEIGHT!!
7. Wash up to pit, clear line until freshwater observed at pits.
8. COUNT EXACT TANKS ON DISPLACEMENT.
9. MAXIMUM OVERDISPLACEMENT = Verify with Company Representative on location prior to the job.

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
12994.3	5.5	17.0	N/A	8RD
0.0	0.0	0.0		

Tubing/Drill Pipe

T/D	Depth, ft	Size, in	Weight, lb/ft	Grade	Thread

Perforations/Open Hole

Top, ft	Bottom, ft	shot/ft	No. of Shots	Total Interval
ft	ft			ft
ft	ft			Diameter
ft	ft			in

Treat Down	Displacement	Packer Type	Packer Depth
Casing	299.9 bbl		ft

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
bbl	302.0 bbl	92.0 bbl	451.0 bbl

Casing/Tubing Secured	1 Hole Vol. Circulated prior to Cement
X	X

Lift Pressure	1900 psi

Pipe Rotated	Pipe Reciprocated
☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	1

Cement Head Type	Single

Job Scheduled For	Arrived on Location	Leave Location
Dec/15/2015	Dec/15/2015	Dec/15/2015

Casing Tools		Squeeze Job	
Shoe Type	Float	Squeeze Type	
Shoe Depth	12994.3 ft	Tool Type	
Stage Tool Type		Tool Depth	ft
Stage Tool Depth	ft	Tail Pipe Size	in
Collar Type	Float	Tail Pipe Depth	ft
Collar Depth	12900.8 ft	Sqz. Total Vol.	bbl

Date	Time 24-hr clock	Flow Rate B/M	Density LB/G	Volume BBL	CPF1_PRESS PSI	Message
12/15/2015	19:42:27	0.0	0.01	0.0	474	Started Acquisition
12/15/2015	19:47:28	0.0	0.01	0.0	473	
12/15/2015	19:52:29	0.0	0.01	0.0	474	
12/15/2015	19:57:30	0.0	8.42	0.0	6	
12/15/2015	20:02:31	0.0	8.40	0.0	7	
12/15/2015	20:07:32	0.0	8.40	0.0	1	
12/15/2015	20:10:56	0.0	8.41	0.0	-0	Fill Line
12/15/2015	20:12:33	5.8	8.40	0.1	459	
12/15/2015	20:15:44	0.0	8.40	8.4	2544	Pressure Test Lines (Low)
12/15/2015	20:17:34	0.0	8.40	8.4	5061	
12/15/2015	20:17:44	0.0	8.40	8.4	5050	Pressure Test Lines (High)
12/15/2015	20:18:38	0.0	8.40	8.4	5000	Reset Total, Vol = 10.00 bbl
12/15/2015	20:22:35	0.0	8.40	8.4	108	
12/15/2015	20:27:36	0.0	8.40	8.4	112	
12/15/2015	20:32:24	0.9	11.02	22.1	147	Start MUDPUSH Ex
12/15/2015	20:32:37	0.9	11.02	22.3	165	
12/15/2015	20:37:38	5.8	10.99	34.3	420	
12/15/2015	20:42:39	5.8	10.88	61.7	350	
12/15/2015	20:47:40	0.0	15.50	88.8	-3	
12/15/2015	20:52:24	5.8	11.93	98.7	449	End MUDPUSH Ex
12/15/2015	20:52:26	5.8	11.93	98.9	446	Reset Total, Vol = 78.68 bbl

Well	Field	Job Start	Customer	Job Number
Alvin 2C-29HZ	Wattenberg	Dec/15/2015	Anadarko	CYUT-00151

Date	Time 24-hr clock	Flow Rate B/M	Density LB/G	Volume BBL	CPF1_PRESS PSI	Message
12/15/2015	21:02:43	5.8	12.11	147.8	326	
12/15/2015	21:07:44	5.8	12.15	177.0	286	
12/15/2015	21:12:45	5.8	12.17	206.1	270	
12/15/2015	21:15:41	5.8	12.10	223.2	247	Good Returns
12/15/2015	21:17:46	5.8	12.11	235.3	245	
12/15/2015	21:22:47	5.8	12.10	264.5	243	
12/15/2015	21:27:48	5.8	12.06	293.6	233	
12/15/2015	21:32:49	5.8	12.09	322.8	236	
12/15/2015	21:37:50	5.9	12.09	352.0	266	
12/15/2015	21:42:51	1.0	12.69	369.8	76	
12/15/2015	21:43:38	1.0	13.46	370.6	80	Wet Dry Samples Taken
12/15/2015	21:43:39	1.0	13.47	370.6	78	End Lead Slurry
12/15/2015	21:43:41	1.0	13.49	370.7	79	Reset Total, Vol = 281.92 bbl
12/15/2015	21:43:44	1.0	13.51	370.7	79	Start Mixing Tail Slurry
12/15/2015	21:46:27	5.8	13.60	384.2	408	Wet Dry Sample Taken
12/15/2015	21:47:52	5.8	13.53	392.4	408	
12/15/2015	21:52:53	5.8	13.45	421.6	363	
12/15/2015	21:57:54	4.0	13.50	448.3	189	
12/15/2015	22:02:55	5.8	13.61	475.8	390	
12/15/2015	22:07:56	5.8	13.64	505.0	402	
12/15/2015	22:12:57	5.8	13.58	534.2	397	
12/15/2015	22:17:58	5.8	13.52	563.3	386	
12/15/2015	22:19:15	5.8	13.49	570.8	381	Good Returns
12/15/2015	22:22:59	5.8	13.57	592.5	406	
12/15/2015	22:28:00	5.8	13.54	621.6	403	
12/15/2015	22:33:01	5.8	13.64	650.8	415	
12/15/2015	22:38:02	5.8	13.54	679.9	411	
12/15/2015	22:40:39	2.3	13.16	694.9	-19	End Tail Slurry
12/15/2015	22:40:41	0.6	11.68	695.0	-21	Reset Total, Vol = 324.28 bbl
12/15/2015	22:41:44	0.0	14.28	695.0	12	Wash Pump Lines
12/15/2015	22:43:03	0.0	14.22	695.0	12	
12/15/2015	22:48:04	0.0	9.28	695.0	16	
12/15/2015	22:53:05	4.0	8.47	699.2	26	
12/15/2015	22:57:54	0.0	8.42	711.4	10	Reset Total, Vol = 16.92 bbl
12/15/2015	22:58:06	0.0	8.42	711.4	9	
12/15/2015	22:58:49	0.0	8.42	711.4	10	Drop Top Plug
12/15/2015	22:58:50	0.0	8.42	711.4	10	Start Displacement
12/15/2015	23:03:07	7.2	8.44	737.5	131	
12/15/2015	23:08:08	7.2	8.44	773.7	931	
12/15/2015	23:13:09	7.2	8.42	810.0	1304	
12/15/2015	23:18:10	7.2	8.41	846.2	1722	
12/15/2015	23:23:11	7.2	8.44	882.3	2125	
12/15/2015	23:28:04	7.2	8.42	917.5	2361	Good Returns
12/15/2015	23:28:12	7.2	8.43	918.5	2350	
12/15/2015	23:33:13	6.2	8.42	952.3	2261	
12/15/2015	23:38:14	5.1	8.43	980.1	2168	
12/15/2015	23:40:08	5.1	8.43	989.8	2190	Cement to Surface @ 279
12/15/2015	23:43:15	5.1	8.43	1005.6	2140	
12/15/2015	23:48:16	2.0	8.43	1024.3	1937	
12/15/2015	23:50:05	0.0	8.45	1027.9	2485	Bump Top Plug
12/15/2015	23:50:06	0.0	8.44	1027.9	2508	End Displacement
12/15/2015	23:51:17	0.0	8.40	1027.9	2529	Reset Total, Vol = 298.92 bbl
12/15/2015	23:53:17	0.0	8.41	1027.9	1	
12/15/2015	23:56:02	0.0	8.41	1030.7	2609	Start Casing Test

Well	Field	Job Start	Customer	Job Number
Alvin 2C-29HZ	Wattenberg	Dec/15/2015	Anadarko	CYUT-00151

Date	Time 24-hr clock	Flow Rate B/M	Density LB/G	Volume BBL	CPF1_PRESS PSI	Message
12/16/2015	00:03:19	0.0	8.41	1030.7	2706	
12/16/2015	00:08:20	0.0	8.42	1030.7	2786	
12/16/2015	00:11:16	0.0	8.42	1030.7	2830	End Casing Test
12/16/2015	00:13:21	0.0	8.42	1030.7	2566	
12/16/2015	00:18:22	0.0	8.42	1030.7	9	
12/16/2015	00:19:00	0.0	8.42	1030.7	10	End Job

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
5.4			7.5	605.7	0.0	78.7	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
5173	9	811	2500			bbl	lb/gal

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp		
%	590.0 bbl	300.1 bbl	67 degF	Cement Circulated to Surface? [X]	Volume 20.0 bbl
				Washed Thru Perfs [ ]	To ft

Customer or Authorized Representative	Schlumberger Supervisor		
Jason Laumb	Wayne Silvester/Justin Storey	Circulation Lost [ ]	Job Completed [X]
		-	-